ABSTRACT OF THE DISCLOSURE

It has now been determined that antisense therapy which reduces the expression of TRPM-2 provides therapeutic benefits in the treatment of cancer. In particular, such antisense therapy can be applied in treatment of prostate cancer and renal cell cancer. Addition of antisense TRPM-2 ODN to prostatic tumor cells *in vivo* is effective for delaying the onset of androgen independence. Thus, prostate cancer can be treated in an individual suffering from prostate cancer by initiating androgen-withdrawal to induce apoptotic cell death of prostatic tumor cells in the individual, and administering to the individual a composition effective to inhibit expression of TRPM-2 by the tumor cells, thereby delaying the progression of prostatic tumor cells to an androgen-independent state in an individual Combined use of antisense TRPM-2 and taxanes synergistically enhances cytotoxic chemosensitivity of androgen-independent prostate cancer. In addition, it has also been found that antisense TRPM-2 has beneficial effect for other cancer types. Specifically, antisense TRPM-2 ODN enhances chemosensitivity in human Renal cell cancer, a normally chemoresistant disease with no active chemotherapeutic agent having an objective response rate higher than 10%. Radiation sensitivity is also enhanced when cells expressing TRPM-2 are treated with antisense TRPM-2 ODN. Thus, the antisense TRPM-2 ODNs can be used to enhance hormone sensitivity, chemosensitivity and radiation sensitivity of a variety of cancer types in which expression of TRPM-2 has been observed.